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(71) Applicant (for all designated States except US): THE UNIVERSITY OF NOTTINGHAM [GB/GB]; University Park, Nottingham NG7 2RD (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LESTER, Edward,

Henry [GB/GB]; Latin House, Derby Road, Risley, Derbyshire DE72 3SU (GB). AZZOPARDI, Barry, James [GB/GB]; 5 Grange Avenue, Beeston, Nottingham NG9 1GJ (GB).

(74) Agent: BARKER BRETELL; 138 Hagley Road, Edgbaston, Birmingham B16 9PW (GB).

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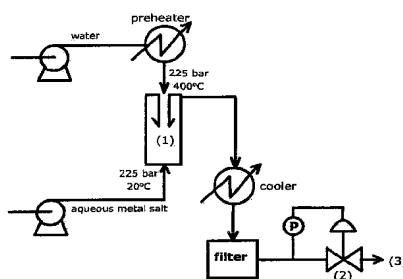
(54) Title: COUNTER CURRENT MIXING REACTOR

A diagram of the funnel shaped supercritical outlet



(57) Abstract: A mixing reactor for mixing efficiently streams of fluids of differing densities. In a preferred embodiment, one of the fluids is supercritical water, and the other is an aqueous salt solution. Thus, the reactor enables the production of metal oxide nanoparticles as a continuous process, without any risk of the reactor blocking due to the inefficient mixing inherent in existing reactor designs.

Schematic representation of a rig which incorporates the mixing reactor of the invention allowing continuous production of particles.



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